

104TH CONGRESS  
1ST SESSION

# S. 624

To establish a Science and Mathematics Early Start Grant program, and  
for other purposes.

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## IN THE SENATE OF THE UNITED STATES

MARCH 24 (legislative day, MARCH 23), 1995

Mr. HATFIELD introduced the following bill; which was read twice and  
referred to the Committee on Labor and Human Resources

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## A BILL

To establish a Science and Mathematics Early Start Grant  
program, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Science and Mathe-  
5       matics Early Start Grant Program Act of 1995”.

6       **SEC. 2. FINDINGS AND PURPOSE.**

7       (a) FINDINGS.—The Congress finds that—

8               (1) preschoolers from low-income families have  
9       very limited opportunities to be exposed to science  
10      and mathematics activities;

1           (2) preschoolers from low-income families need  
2       basic, age-appropriate science and mathematics ex-  
3       periences in order to develop educationally at a nor-  
4       mal rate;

5           (3) most preschool teachers have little experi-  
6       ence with simple science and mathematics activities;

7           (4) attainment of the National Education Goal  
8       that calls for United States students to be first in  
9       the world in mathematics and science achievement  
10      will require a comprehensive, age-appropriate science  
11      and mathematics program for preschoolers from low-  
12      income families;

13          (5) long-term efforts to train preschool teachers  
14      to use science and mathematics activities have been  
15      limited in number; and

16          (6) the long-term efforts to train preschool  
17      teachers to use science and mathematics activities  
18      that have been implemented have shown significant  
19      positive results.

20      (b) PURPOSE.—The purpose of this Act is to provide  
21      Head Start teachers with training programs directed to-  
22      ward the use of age-appropriate science and mathematics  
23      activities in order to increase their students' interest in  
24      and familiarity with science and mathematics. All students  
25      should have a basic exposure to science and mathematics

1 activities in order to move the Nation toward the National  
2 Goal that United States students will be first in the world  
3 in mathematics and science achievement.

4 **SEC. 3. MODEL SCIENCE AND MATHEMATICS EARLY START**  
5 **PROGRAMS FOR THE INTRODUCTION OF**  
6 **SCIENCE AND MATHEMATICS IN EARLY**  
7 **CHILDHOOD EDUCATION.**

8 (a) GRANTS AUTHORIZED.—The Secretary of Health  
9 and Human Services (hereafter referred to in this Act as  
10 the “Secretary”) may award grants, to be known as  
11 Science and Mathematics Early Start Grants, to organiza-  
12 tions to enable such organizations to support model pro-  
13 grams that provide instruction to Head Start personnel  
14 regarding the introduction of science and mathematics ac-  
15 tivities to children enrolled in Head Start programs.

16 (b) PRIORITY.—In awarding grants under this sec-  
17 tion, the Secretary shall give priority to applicants that  
18 demonstrate the ability to—

19 (1) provide teacher training programs that in-  
20 volve participants in hands-on activities similar to  
21 activities that are intended for students;

22 (2) attract broad teacher participation;

23 (3) use experienced teachers as instructors;

24 (4) provide the materials required by the activi-  
25 ties described in paragraph (1), but not commonly

1 found in Head Start classrooms, except that not  
2 more than 25 percent of the funds awarded for each  
3 fiscal year to any organization for a model program  
4 shall be used to carry out this paragraph;

5 (5) provide for periodic followup activities con-  
6 ducted, at minimum, during a 6-month period; and

7 (6) provide teachers with college or university  
8 experience and credits.

9 (c) DISSEMINATION.—Each recipient of a grant  
10 under this section shall report the results of the model  
11 program to the Eisenhower National Clearinghouse for  
12 Mathematics and Science Education in an appropriate for-  
13 mat for dissemination.

14 (d) AUTHORIZATION OF APPROPRIATIONS.—There  
15 are authorized to be appropriated \$4,000,000 for fiscal  
16 year 1996, and such sums as may be necessary for each  
17 of the fiscal years 1997 through 2000, to carry out this  
18 section.

19 (e) EVALUATION AND REPORT.—The Secretary shall  
20 evaluate, and report to the Congress every 2 years (begin-  
21 ning 2 years after the date of enactment of this Act) re-  
22 garding, the activities assisted under this section.

23 **SEC. 4. PROFESSIONAL DEVELOPMENT FUNDING.**

24 (a) PROGRAM AUTHORIZED.—The Secretary may  
25 award grants to each of the ten regional Head Start agen-

1 cies for the purpose of improving teaching and learning  
2 through sustained and intensive high-quality professional  
3 development activities in science and mathematics at the  
4 regional and local agency levels.

5 (b) ALLOCATION OF FUNDS.—

6 (1) REGIONAL ALLOCATION.—From the  
7 amounts appropriated for a fiscal year under sub-  
8 section (f), the Secretary shall allot to each of the  
9 ten regional Head Start agencies an amount that  
10 bears the same ratio to the amount appropriated as  
11 the number of children enrolled in the Head Start  
12 programs administered by the regional agency bears  
13 to the number of children enrolled in all Head Start  
14 programs, as determined by the Secretary on the  
15 basis of the most recent satisfactory data. In making  
16 determinations under this paragraph, the Secretary  
17 shall establish a per child ratio amount.

18 (2) REALLOCATION.—With respect to the allot-  
19 ment of any regional agency that fails to apply for  
20 an allotment for any fiscal year, the Secretary shall  
21 reallocate such amount to the remaining regional agen-  
22 cies in proportion to the original allotment to such  
23 agencies.

1 (c) WITHIN-REGION ALLOCATIONS.—Of the amounts  
2 received by a regional agency under this section for any  
3 fiscal year—

4 (1) not less than 90 percent of such amounts  
5 shall be made available for local permissible activi-  
6 ties (hereafter referred to in this Act as “flow-  
7 through funds”); and

8 (2) not to exceed 10 percent of such amounts  
9 may be retained by the regional agency, of which—

10 (A) not to exceed 3 percent of such  
11 amounts may be used for the administrative  
12 costs of the regional agency; and

13 (B) the remaining amounts shall be used  
14 to fund or expand exemplary and innovative  
15 science and mathematics professional develop-  
16 ment programs.

17 (d) LOCAL PLAN AND APPLICATION FOR IMPROVING  
18 MATHEMATICS AND SCIENCE TEACHING AND LEARN-  
19 ING.—

20 (1) LOCAL APPLICATION.—

21 (A) IN GENERAL.—A local Head Start  
22 agency that desires to receive a grant under  
23 this section shall prepare and submit to the ap-  
24 propriate regional Head Start agency an appli-

1 cation (singly or as a consortium) at such time  
2 as the regional agency shall require.

3 (B) INDICATORS.—As part of an applica-  
4 tion submitted under subparagraph (a), a local  
5 Head Start agency shall establish specific goals  
6 and objectives for improving mathematics and  
7 science teaching and learning through profes-  
8 sional development.

9 (2) NEEDS ASSESSMENT.—

10 (A) IN GENERAL.—As part of an applica-  
11 tion submitted under paragraph (1), a local  
12 Head Start agency shall include an assessment  
13 of local needs for professional development as  
14 identified by the local Head Start agency and  
15 staff.

16 (B) REQUIREMENTS.—A needs assessment  
17 to be included in an application under subpara-  
18 graph (A) shall be carried out with the involve-  
19 ment of teachers, and shall take into account  
20 the activities that need to be conducted in order  
21 to give teachers and, where appropriate, admin-  
22 istrators, the means, including the knowledge  
23 and skills, to provide Head Start children with  
24 the opportunity to develop a strong foundation  
25 in mathematics and science.

1           (3) APPLICATION CONTENTS.—An application  
 2 submitted under this section shall include the plans  
 3 of the local Head Start agency for professional de-  
 4 velopment that—

5           (A) focus on teaching and learning in  
 6 mathematics and science;

7           (B) have been developed with the extensive  
 8 participation of Head Start teachers, adminis-  
 9 trators, staff, and pupil services personnel;

10          (C) include a time line for the professional  
 11 development activities indicating duration and  
 12 schedule; and

13          (D) will be periodically reviewed and re-  
 14 vised by the local Head Start agency, as nec-  
 15 essary, to reflect changes in the strategies and  
 16 programs of the local Head Start agency under  
 17 this section.

18       (e) LOCAL ALLOCATION OF FUNDS AND PERMIS-  
 19 SIBLE ACTIVITIES.—

20           (1) AMOUNT OF ALLOCATION.—The maximum  
 21 amount of a grant for which a local Head Start  
 22 agency may apply under this section shall equal the  
 23 product of—

24           (A) the number of children served by the  
 25 local agency; and



1 (B) the per child ratio amount determined  
2 under subsection (b)(1).

3 (2) REALLOCATION.—If a local Head Start  
4 agency does not apply for a grant prior to the grant  
5 allocation deadline that is established by the regional  
6 Head Start agency involved, the regional agency  
7 shall reallocate the amount that any such local agen-  
8 cy would have received to the remaining local agen-  
9 cies in proportion to their original grant allocations.

10 (3) LOCAL ALLOCATION OF FUNDS.—A local  
11 Head Start agency that receives a grant under this  
12 section for any fiscal year—

13 (A) shall use not less than 70 percent of  
14 the amount received under such grant for the  
15 professional development of teachers, and,  
16 where appropriate, administrators, and, where  
17 appropriate, pupil services personnel, parents,  
18 and other staff of individual schools to pay for  
19 direct program costs to include—

- 20 (i) stipends;
- 21 (ii) tuition, registrations, and fees;
- 22 (iii) related travel, food, and lodging;
- 23 (iv) child care; and
- 24 (v) training supplies, books, and ma-  
25 terials; and

1 (B) may use not to exceed 30 percent of  
2 the amount received under such grant for math-  
3 ematics and science classroom supplies, equip-  
4 ment, and materials.

5 (4) AUTHORIZED ACTIVITIES.—

6 (A) IN GENERAL.—A local Head Start  
7 agency that receives a grant under this section  
8 shall use amounts received under such grant for  
9 activities that give Head Start teachers and ad-  
10 ministrators the knowledge and skills to provide  
11 children with the opportunity to develop a  
12 strong foundation in mathematics and science.

13 (B) PROFESSIONAL DEVELOPMENT ACTIVI-  
14 TIES.—Professional development activities fund-  
15 ed under this section shall—

16 (i) take into account recent research  
17 on the teaching and learning of mathe-  
18 matics and science;

19 (ii) provide professional development  
20 that incorporates effective strategies, tech-  
21 niques, methods, and practices for meeting  
22 the educational needs of diverse groups of  
23 students, including females, minorities,  
24 children with disabilities, limited English

1 proficient children, and economically dis-  
2 advantaged children;

3 (iii) include preparation for future  
4 mathematics and science content and peda-  
5 gogical components; and

6 (iv) be of sufficient intensity and du-  
7 ration to have a positive and lasting im-  
8 pact on the Head Start teacher's perform-  
9 ance in the classroom.

10 (C) ACTIVITIES.—Amounts received under  
11 a grant under this section may be used for pro-  
12 fessional development activities such as—

13 (i) professional development for teams  
14 of teachers, and, where appropriate, ad-  
15 ministrators, pupil services personnel, or  
16 other staff, to support the teaching of  
17 mathematics and science using devel-  
18 opmentally appropriate activities;

19 (ii) to enable Head Start teachers and  
20 appropriate staff to participate in profes-  
21 sional development in mathematics and  
22 science programs that are offered through  
23 professional associations, universities, com-  
24 munity-based organizations, and other pro-  
25 viders, such as educational partnership or-

ganizations, science centers, and museums,  
including financial support and time off;

(iii) activities that provide follow up  
for teachers who have participated in pro-  
fessional development activities that are  
designed to ensure that the knowledge and  
skills learned by the teacher are imple-  
mented in the classroom;

(iv) support for partnerships between  
Head Start agencies, consortia of agencies,  
and institutions of higher education, in-  
cluding schools of education, which shall  
encourage teachers to participate in inten-  
sive, ongoing mathematics and science pro-  
grams, both academic and pedagogical, at  
institutions of higher education;

(v) the establishment and mainte-  
nance of local professional networks that  
provide a forum for interaction among  
teachers and that allow exchange of infor-  
mation on advances in mathematics and  
science content and teaching pedagogy;

(vi) professional development to en-  
able teachers, and, where appropriate,  
pupil services personnel and other school

1 staff, to ensure that females, minorities,  
2 limited English proficient children, chil-  
3 dren with disabilities, and the economically  
4 disadvantaged have full opportunity to de-  
5 velop a strong foundation in mathematics  
6 and science;

7 (vii) preparing teachers, and, where  
8 appropriate, pupil services personnel to  
9 work with parents and families on foster-  
10 ing student achievement in mathematics  
11 and science;

12 (viii) professional development activi-  
13 ties and other support for new teachers as  
14 such teachers move into the Head Start  
15 classroom to provide practical support and  
16 to increase mathematics and science con-  
17 tent and teaching pedagogy for such teach-  
18 ers;

19 (ix) professional development for  
20 teachers, parents, early childhood edu-  
21 cators, administrators, and other staff to  
22 support activities and services related to  
23 preschool transition programs to raise stu-  
24 dent performance in mathematics and  
25 science; and

1                   (x) developing professional develop-  
2                   ment strategies and programs to more ef-  
3                   fectively involve parents in helping their  
4                   children achieve in mathematics and  
5                   science.

6           (f) AUTHORIZATION OF APPROPRIATIONS.—There  
7   are authorized to be appropriated to carry out this section,  
8   \$6,000,000 for fiscal year 1996, and such sums as may  
9   be necessary for each of the fiscal years 1997 through  
10 2000.

11          (g) REPORTING AND ACCOUNTABILITY.—

12               (1) REGIONS.—Not later than September 30,  
13   1996, and each September 30 thereafter, a regional  
14   Head Start agency that receives funds under this  
15   section shall prepare and submit to the Secretary a  
16   report concerning—

17                   (A) the status of the activities and grants  
18                   completed and currently in operation during the  
19                   year for which the report is submitted;

20                   (B) an evaluation of the implementation of  
21                   this section; and

22                   (C) an evaluation of the effectiveness of  
23                   local Head Start agency activities assisted  
24                   under this section.

1           (2) LOCAL HEAD START AGENCIES.—Not later  
2           than 3 months after the conclusion of the grant pe-  
3           riod, the local Head Start agency that receives the  
4           grant under this section shall prepare and submit to  
5           the appropriate regional Head Start agency a report  
6           concerning the progress of such local agency toward  
7           meeting the goals and objectives identified in the  
8           local application and plan of such local agency, as  
9           well as concerning the effectiveness of the activities  
10          of the agency under this section.

11          (3) FEDERAL EVALUATION.—Not later than 2  
12          years after the date of enactment of this Act, the  
13          Secretary shall prepare and submit to the President  
14          and the appropriate committees of Congress a report  
15          concerning the effectiveness of the programs and ac-  
16          tivities conducted under this section.

○